

REMARKS

Claims 1-62 remain pending.

The Examiner rejected claims 1-11, 19-26, 28-29, and 36-52, 54, 55, 61, and 62 under 35 U.S.C. §103(a) as being unpatentable over Otani (U.S. patent 6,351,469). The Examiner has also rejected the remaining claims under 35 U.S.C. §103(a) as being unpatentable over Otani in view of one or more secondary references Eng (U.S. patent 5,963,557), Friedman (U.S. patent 5,949,788), and Data-Over-Cable Service Interface Specification (DOCSIS), Radio Frequency Interface Specification, SP-RFI-I02-971008, Interim Specification, Cable Television Laboratories, 1997 (herein referred to as DOCSIS-1997).

Claim 36 is directed towards a computer readable medium that has a similar limitation. Claim 61 is directed towards an apparatus that has means having a similar feature. Claim 11 is directed towards a cable modem and requires that "the multiple upstream channels are assigned within a downstream channel received into the cable modem" and "the first upstream channel has a different frequency range than the second upstream channel." Claim 19 is directed towards a head end for receiving upstream data from a cable modem and requires that the head end is "further operable to assign the first upstream channel and the second upstream channel to the cable modem" and that "the first upstream channel has a different frequency range than the second upstream channel." Claim 62 is directed towards an apparatus that has means having a similar feature. Claim 20 is another method claim for transmitting upstream data and requires "receiving a downstream signal within a downstream channel into the cable modem" and "configuring the cable modem to transmit over the a first upstream channel specified in the downstream signal." Claim 20 also recites "configuring the cable modem to transmit over a second upstream channel which has a different frequency range than the second upstream channel if the second channel is specified in the downstream signal." Claim 36 is directed towards a computer readable medium and has a similar limitation. Claim 35 is directed towards a cable modem having a processor configured to "a processor configured to receive a downstream signal within a downstream channel into the cable modem, configure the first transmitter to transmit data over a first upstream channel obtained from the downstream signal, configure the second transmitter to transmit data over a second upstream channel having a different frequency than the first channel and obtained from the downstream signal if the second upstream channel is available, initiate transmission of a first data portion over the first upstream channel by writing to the first memory portion of the first media access controller and initiate transmission of a second data portion over the second upstream channel by writing to the second memory portion of the second media access controller."

The Examiner admits on page 3 of the Office Action of 13 August 2003 that only reference cited reference Otani fails to teach or suggest a method or apparatus for transmitting or configuring multiple upstream channels in a cable modem based on upstream channels having different frequency ranges, in the manner claimed in claims 1, 11, 20, 35, 36, and 61.

The examiner takes Official Notice in the last full paragraph on page 3 of the Office Action of 13 August 2003 (with reference to the independent claims as well as other dependent claims) that "transmitting channels on different frequencies ranges is a well known means of transmitting a plurality of channels simultaneously by dividing the bandwidth up into 6 MHz sub-channels." In accordance with MPEP 2144.03, applicant traverses the assertions by the examiner that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide upstream channels having different frequencies, in the manner claimed. Applicant respectfully requests that in accordance with MPEP 2144.03, the examiner cite one or more references in support of his assertion. Applicant submits this traverse with respect to each and every claim in which the examiner used the above mentioned items of alleged common knowledge to reject the claims as unpatentably obvious.

If the Examiner provides such a reference, it is also respectfully requested that the Examiner provide motivation to radically modify the teachings of Otani to implement different frequencies on different channels, in the manner claimed, as required by MPEP 2144.01.

The Examiner's rejections of the dependent claims are also respectfully traversed. However, to expedite prosecution, all of these claims will not be argued separately. Claims 2-10, 12-18, 21-34, and 38-60 each depend directly from independent claims 1, 11, 20, 36, or 37 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claims 1, 11, 20, 36, or 37. Further, the dependent claims require additional elements that when considered in context of the claimed inventions further patentably distinguish the invention from the cited art.

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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